By Rep. Russ Carnahan, Special to Roll Call

As the debate over future energy legislation continues, it is essential that an area where 40 percent of our total energy consumption occurs remains in these discussions — buildings. Investing in energy efficiency measures in buildings is the most immediate and effective way to reduce carbon emissions, lower energy demand, create good, clean energy jobs and save money.

The built environment has a larger impact on the overall environment than many think. Each year, our homes, offices, schools and other buildings consume 70 percent of electricity, 60 percent of all raw materials and 12 percent of all potable water in the Unites States alone. Through more efficient building practices and new technologies, we are beginning to address these problems in our built environment, but we must do better.

I am a strong advocate of increasing the number of high-performance building technologies and construction throughout the United States. A high-performance building is one that incorporates an entire systems approach to building that includes energy efficiencies, water savings, use of recycled and recyclable materials, life cycle analysis and other environmental attributes into designs that are accessible, secure, resilient and, in many cases, historically preserved.

Through a new and more sustainable approach to designing, constructing and operating new buildings and retrofitting and operating older buildings, we can address and reduce the numerous and varied environmental, climate, health and economic impacts that result from our built environment. These high-performance buildings are not just examples of raw technical ingenuity; they are also inherently designed to decrease consumption and thus the overall cost of the building over the course of its lifetime.

This week, I had the opportunity to visit a building that has undergone these very transformations. When the Department of Transportation vacated the David Nassif Building in June 2007, the building's 40-year owner, David Nassif Associates, promptly commenced a total renovation of its property and renamed it "Constitution Center."

Rep. Russ Carnahan (facing camera) tours the Constitution Center, a renovated green building in Washington, D.C. Constitution Center hopes to become one of the most energy efficient buildings in Washington, D.C., and the largest office renovation project in the United States on track to achieve a Leadership in Energy and Environmental Design gold rating, developed by the U.S. Green Building Council to measure energy savings, water efficiency, CO2 emissions

reduction, indoor environmental quality and stewardship of resources.

The results of their commitment to transforming this existing structure into a high-performance building are significant. The Constitution Center can reasonably predict energy usage (electricity and natural gas) that is approximately 45 percent less than the building had before its renovation. It can also project energy usage that is around 22 percent less than the model energy efficient D.C. office building standard set by the American Society of Heating, Refrigerating and Air Conditioning Engineers.

The Constitution Center represents the shift in priorities that we must take in our built environment, and it is proof positive that investments in high-performance building technologies not only help to reduce buildings' energy consumption but also save money. Most importantly, the technologies required to make our built environment more efficient are already available.

Outside of specific building equipment upgrades, there are also changes that we need to make in the building process. One area of particular importance is integrated project delivery. This is a building approach that brings together the relevant parties — architect, builder, owner, contractors and operations teams — at the beginning of the project development. This collaborative approach allows one to harness the talents and insights of all participants to optimize project results, increase value to the owner, reduce operational costs and waste, and maximize efficiency through all phases of design, construction and occupancy. The use of a collaborative process will help owners meet the increasingly aggressive goals for energy and carbon reduction, all while reducing the overall cost.

By designing and building high- performance buildings, we reduce energy consumption and our carbon footprint. We save both water and raw materials. We save demolition and construction debris from going to landfills. Most importantly, high- performance building construction creates good-paying jobs that give workers the valuable skills they need to excel in a clean energy economy.

In the often polarizing debate over energy and climate change legislation, I believe that increasing our building energy efficiency is one area that we can all agree upon. I look forwarding to working with my colleagues to pass much needed energy independence and security legislation.

Rep. Russ Carnahan (D-Mo.) is the co-founder and co-chairman of the Congressional High Performance Buildings Caucus.